

Blue Collar Description
7/04
Sign Painter Grade B-10
Class Code 998403

Working Procedure:

Primary job function:

This position is a Sign Fabricator and Painter for the MDT. The position is responsible for designing and developing signs, decals, and traffic control devices using computer and manual production methods; producing signs and other products using a variety of layout and production methods; preparing and packing all products; project management; inventory control; and providing technical assistance and expertise to other MDT work units, the public, contractors, and other agencies. The position reports to the Shop Foreman.

Duties:

A. Design and layout

Design and develop signs, decals, and other products (e.g., patterns and stencils) to meet customer needs, specifications, and to ensure compliance with regulations for uniform nationwide signage, and to create new designs for unique traffic control situations.

1. Review sign orders to determine production requirements, specifications, and to estimate time and materials. This also includes determining components such as size, color, shape, language used, legends, letters, symbols, borders, etc. Develop designs for the production of signs using a personal computer, graphic design software, and uniform templates and images. Layout signs for production to ensure compliance with standards and appropriate and efficient use of supplies and materials. This includes adjusting lengths, sizes, incorporating updates, determining correct color, size, and retro-reflectivity or grade of sheeting. This position must ensure uniformity in design, color, and language. Operate advanced software and computer equipment to import CADD images from traffic drawings, convert and store files and images, and to scan and digitize images. Operate graphic design computer programs using mathematical calculations and visual layout to design unique signs and decals as required and to produce positives or negatives for screen-printing. Communicate effectively with administrators, designers, stockpersons, contractors, vendors, and others regarding sign requests and designs, orders, shipments, inventory, and scheduled signs.

B. Sign production

Produce signs and other products to meet customer needs in compliance with local, state, and federal standards and to ensure cost effective operations and efficient and effective use of equipment, tools, supplies and materials. This includes adhering pressure or heat sensitive sheeting, legends, symbols, or screen-printed faces to aluminum or plywood substrate, and ensuring compliance with specifications related to reflectivity and other standards.

1. Select substrate for producing signs. This includes determining the proper thickness and dimensions of substrate. Ensure appropriate selection of back bracing and adhesives (e.g., VHB tape) to properly support signs by calculating the weight of signs to determine appropriate backing and adhesives.
2. Prepare and cut substrate for sign production. Layout and cut substrate to the appropriate size and dimensions using a variety of tools: PLYWOOD - table saw,

radial arm saw, band saw, circular saw, jig saw, and sanders; ALUMINUM - shears, drill press, drills, files, rivet guns, and hinges; back bracing - chop saw, degrease, files, and VHB tape. Prepare specialized substrate for unique or custom jobs including repairing, repainting, and rerouting historical markers which includes specialized processes such as manual routing of lettering.

3. Apply sheeting to substrates to develop signs that meet manufacturer's specifications and that will endure the elements and other site conditions. Select the appropriate sheeting based on the particular job including Diamond Grade, High Intensity, Engineer Grade, and Prismatic Sheeting. Application involves the use of heat activated sheeting, pressure sensitive sheeting, oven, pneumatic rollers, interstate squeeze roller, de-burring, degreasing, cutting sheeting using knives, paper cutters, and the hydraulic shear.
4. Print screens, text, and images for signs according to manufacturer's sheeting specifications and project needs while ensuring compliance with uniform regulations and ensuring effective use of materials. Prepare multi-color screens for high-quantity jobs (e.g., vehicle decals). Custom mix and match unique colors. Mass-produce signs by screening images using photographic processes (film positive or negative) to apply images to the screens. Prepare and apply customized images, screens and text for special jobs using a variety of methods including using direct emulsion, photo light table exposure, and rubilyth in the processes, and also operating the vacuum squeegee table and high pressure washer.
5. Prepare and pack all signs and other products for shipping and delivery to ensure that products are properly identified and routed and that they are not damaged during transit. Must obtain forklift certification within 6 months of hire date.

C. Project & inventory management

Use and maintain a variety of administrative systems and computer applications to research, manage and track projects and to control shop inventory.

1. Supply Inventories: This includes tracking stock using databases, and researching new products and production methods using Internet applications. Use Internet and e-mail applications to transfer, electronically ship, and receive work products and project details.
2. Track project hours, materials, timelines and other details using automated tracking software (e.g., databases and spreadsheets). This includes entering data, reviewing information, and running automated queries and reports. Track and approve completed jobs using on-line systems.
3. Perform daily inventory adjustments by electronically shipping and transferring signs and materials in the statewide stores system, and by using and preparing a variety of reports including usage, cost, scheduling, requisitions and transfers, and audits of previous work.
4. Count, and assist in identifying discrepancies or errors in the annual physical inventory, which includes approximately \$500,000 in stores inventory. Conduct research, reviews, and recounts to resolve the discrepancies or errors to avoid repeating.
5. Research new products and production methods by conducting Internet research, reviewing various trade manuals, and keeping close contact with sign producers, contractors and suppliers. Recommend new methods and products.

D. Other duties

Perform a variety of other technical and administrative work in support of the Sign Shop, Maintenance Division, other MDT work units, and other local, state, and federal agencies. This includes providing technical assistance;
3 and attending training and continuing education as required to maintain job proficiency. Communicate effectively with a wide variety of people in the ordering, production, and shipping of signs and traffic control devices.

Tools and Equipment / Materials and Product:

- Personal computer
- Software including standard office applications, graphic design, scanning applications, TIS Image Viewer, Inter- and Intranet, Oracle, Word, Outlook, Gerber Graphix Advantage, and Micro station.
- Printer, scanner, plotters and other PC peripherals
- Safety equipment including a respirator, gloves, apron, exhaust fans, steel toe boots, eye protection, and hearing protection.
- Shop equipment including table saw, radial arm saw, band saw, circular saw, jig saw, sanders, shears, drill press, drills, files, rivet guns, chop saw, routers and files.
- Sign fabrication equipment (e.g., vacuum squeegee table, vacuum applicator, high pressure washer, shears, knives, paper cutters, hydraulic cutters, pneumatic rollers, screen printing equip.) etc.
- Materials including various sign sheeting such as Diamond Grade, High Intensity, Engineer Grade, Prismatic, All grades from all manufacturers. Aluminum sheets, blanks, wind beam, VHB tapes, Plywood, Paints, Inks, Thinners, Hardeners, Reducers, Adhesives, Degreasers, Photo Chemicals, Cleaners, ect.

Source of supervision:

Assignments are determined by the supervisor (Sign Shop Foreman or other designated person) or requisitions and requests placed by the maintenance divisions and field staff.

Physical demands:

Heavy, awkward lifting and carrying (in excess of 50 lbs), repetitive motion, continuous standing, bending, and working stretched out over signs. Working with and around sharp and moving materials and tools such as shears, presses, saws, and drills. Constant exposure to noise from tools, machines, and equipment. Exposure to fumes from extremely hazardous paints, inks, solvents, degreasers, and adhesives, etc. Requires the use of respirator, rubber gloves, protective clothing, and safety equipment including hearing and eye protection, steel-toed boots, and aprons.

Education, Trade Knowledge, and Experience:

This position requires journeyman-level experience in sign fabrication. This is typically acquired through high school graduation or equivalent, and two years progressively responsible experience in the sign fabrication and painting trades.

Knowledge:

- The principles and practices of graphic design and sign fabrication including metal fabrication; and woodworking.
- Screen-printing processes.
- State and federal regulations including MUTCD, Standard Specifications for Roads and Bridges, and Montana Standard Drawings.

- State and federal safety and health regulations, including OSHA and EPA requirements for workplace safety and waste disposal.
- Mathematical calculations and accounting practices.
- Project documentation and legal requirements.
- Personal computers and high quality graphic design, Micro Station, spreadsheet, word processing, and other software applications.
- Office administration including record keeping and file management.
- State and MDT personnel policies and practices and procedures.

Skills:

Skill in the operation of personal computers and standard software applications; design, fabrication, tools and equipment; banding equipment and forklifts; and sign fabrication tools and machinery. Skill in applying mathematics to calculate weights, tolerances, and specifications.

Abilities:

Ability to read and interpret sign layout diagrams and estimate quantities; learn and apply new production processes and tools; and to communicate effectively with a variety of individuals including management, field staff, contractors, vendors, and other agencies.

Responsibility (Scope and Effect):

Ensuring compliance with state and federal regulations and consistency in statewide signage is critical for ensuring the safety of the traveling public and for protecting the state from legal liability. Quality control of products directly affects the effectiveness and longevity of signage, and production loss control directly affects the efficiency and cost of sign shop operations.

Necessary Special Requirements:

The position requires:

- A regular Montana Driver's License is required for all positions in the Helena Sign Shop.
- Must live or relocated within 30 road miles of the work headquarters and must have a telephone or otherwise be reasonably accessible to the work location.

The above statement reflects the general details considered necessary to describe the principle functions of the job identified and shall not be construed as a detailed description of all work requirements that may be inherent in the job.